

This Listing Statement is compiled by the Exchange from documents filed by the Company in making application for listing. It is issued for the information of members, member firms and member corporations of the Exchange. It is not and is not to be construed as a prospectus. The Exchange has received no consideration in connection with the issue of this Listing Statement other than the customary listing fee. The documents referred to above are open for inspection at the general office of the Exchange.

LISTING STATEMENT No. 2225

LISTED JANUARY 17, 1966
9,000,000 shares without par value.
Ticker abbreviation "GCOS"
Dial ticker number 1882
Post section 9.6

THE TORONTO STOCK EXCHANGE

LISTING STATEMENT

GREAT CANADIAN OIL SANDS LIMITED

Incorporated under the Companies Act of Canada by
Letters Patent dated December 29, 1953.

1. Address of the Company's Head Office and of any other offices:

85 Bloor Street East, Toronto, Ontario.
10117 Jasper Avenue, Edmonton, Alberta.

2. Officers of the Company:

OFFICE HELD	NAME	ADDRESS	OCCUPATION
Chairman of the Board	William Harold Rea	27 Blyth Hill Road, Toronto, Ontario.	Executive
President	Clarence Herbert Thayer	502 East Country Club Lane, Wallingford, Pennsylvania, U.S.A.	Executive
Vice-President	Alex Ethelred Barron	8 Glenallan Road, Toronto, Ontario.	Executive
Vice-President	Thomas Peter Clarke	108 Westbrook Drive, Edmonton, Alberta.	Professional Engineer
Vice-President	William Henry Davis	2190 Washington Street, San Francisco, California, U.S.A.	Professional Engineer
Vice-President	Donald Jaffray Wilkins	64 Garfield Avenue, Toronto, Ontario.	Investment Dealer
Secretary	Ardagh Sidney Kingsmill	91 Castle Knock Road, Toronto, Ontario.	Solicitor
Assistant Secretary	Donald Milner Treadgold	69 Kimbark Boulevard, Toronto, Ontario.	Solicitor
Treasurer	James Spencer Roe	2 Faircroft Boulevard, Scarborough, Ontario.	Executive
Assistant Treasurer	Maurice Bradley Parmelee	120 Rosedale Valley Road, Toronto, Ontario.	Executive

3. Directors of the Company:

NAME	ADDRESS	OCCUPATION
Alex Ethelred Barron	8 Glenallan Road, Toronto, Ontario.	Executive
Thomas Peter Clarke	108 Westbrook Drive, Edmonton, Alberta.	Professional Engineer
William Henry Davis	2190 Washington Street, San Francisco, California, U.S.A.	Professional Engineer
Darwin Worth Ferguson	1163 Red Rose Lane, Villanova, Pennsylvania, U.S.A.	Executive

3. Directors of the Company (Continued):

NAME	ADDRESS	OCCUPATION
Ardagh Sidney Kingsmill	91 Castle Knock Road, Toronto, Ontario.	Solicitor
Robert Law	95 DeVere Gardens, Toronto, Ontario.	Solicitor
Maxwell Charles Gordon Meighen	102 Binscarth Road, Toronto, Ontario.	Executive
John Haney McWilliams	111 Guernsey Road, Swarthmore, Pennsylvania, U.S.A.	Executive
William Harold Rea	27 Blyth Hill Road, Toronto, Ontario.	Executive
James Spencer Roe	2 Faircroft Boulevard, Scarborough, Ontario.	Executive
Clarence Herbert Thayer	502 East Country Club Lane, Wallingford, Pennsylvania, U.S.A.	Executive
Joseph Grant Spratt	1040 Sydenham Road, Calgary, Alberta.	Executive
Donald Jaffray Wilkins	64 Garfield Avenue, Toronto, Ontario.	Investment Dealer

4. Names and addresses of all transfer agents:

The Canada Trust Company at 33 Adelaide Street West, Toronto, Ontario.
10182 102nd Street, Edmonton, Alberta.
528 8th Avenue S.W., Calgary, Alberta.

5. Particulars of any fee charged upon transfer other than customary government taxes:

No fee charged upon transfer other than customary government taxes.

6. Names and addresses of all registrars:

The Canada Trust Company at 33 Adelaide Street West, Toronto, Ontario.
10182 102nd Street, Edmonton, Alberta.
528 8th Avenue S.W., Calgary, Alberta.

7. Amount of authorized capital: 9,000,000 shares without nominal or par value.

8. Number of shares and par value: 9,000,000 shares without nominal or par value.

9. Full details of all shares issued in payment for properties or for any other assets other than cash:

DATE	NUMBER OF SHARES	Brief description of the properties or other assets and the aggregate consideration therefor, expressed in cash, shares, etc.
January 26, 1955	150,000	Licensing rights acquired by the Company to use Canadian Patent 488,928 under and subject to the terms and conditions of an Agreement dated January 26, 1955 between the Company and Oil Sands Limited, the value of the consideration having been determined at \$225,000.
January 26, 1955	350,000	Assignment dated January 26, 1955 from Lloyd Rogers Champion to the Company of Bituminous Sands Prospecting Permit No. 15, Alberta, the value of the consideration having been determined at \$337,500.
Total	500,000	

10. Full details of all shares sold for cash.

DATE	NO. OF SHARES	PRICE	AMOUNT REALIZED
Dec. 30, 1953	5	\$3.00	\$ 15.00
Jan. 26, 1955	60,000	3.00	180,000.00
Feb. 2, 1955	65,000	3.00	195,000.00
July 16, 1957	80,000	3.00	240,000.00
June 26, 1962	39,999	2.25	89,997.75
Oct. 23, 1962	39,999	2.60	103,997.40
Apr. 30, 1963 to June 21, 1965	125,000	3.00	375,000.00
Aug. 23, 1963	349,989	2.75	962,469.75
Aug. 23, 1963	120,000	5.00	600,000.00
Mar. 14, 1964	100,000	1.50	150,000.00
July 29, 1964	2,500	3.00	7,500.00
Aug. 21, 1964	600,000	5.00	3,000,000.00
Feb. 16, 1965	1,000,000	5.00	5,000,000.00
Feb. 18, 1965 to June 17, 1965	2,900,000	5.00	14,500,000.00
	5,482,492		\$25,403,979.90

11. Total number of shares issued:	5,982,492										
12. Number of shares now in treasury or otherwise unissued.	3,017,508										
13. Particulars of any issued shares held in trust for the Company or donated for treasury purposes.	Not applicable										
14. Date of last annual meeting.	April 28, 1965.										
15. Date of last report to shareholders.	March 26, 1965 - Annual Report.										
16. Details of any treasury shares (or shares issued subject to payment or shares held for the benefit of the treasury) now under option or the subject of any underwriting or sales agreement. If none, this to be stated.	<p>500,000 treasury shares reserved for issuance upon partial conversion of 6% Debentures (Alberta Issue) of the Company. After May 15, 1968 and before May 1, 1975, \$32 of each \$100 principal amount of said Debentures convertible (a) into 4 shares if converted after May 15, 1968 but before May 16, 1970, (b) into 3 shares if converted after May 15, 1970 but before May 16, 1973, or (c) into 2 shares if converted after May 15, 1973 but before May 1, 1975.</p> <p>By Agreement made as of June 29, 1964, W. Harold Rea holds an outstanding option to purchase 7,500 treasury shares at the price of \$3.00 per share exercisable at a cumulative rate not in excess of 2,500 such shares per 12-month period up to June 29, 1967, expiring on June 29, 1969, or subject to terms of the Agreement, upon termination of employment.</p>										
17. Names and addresses of persons having any interest, direct or indirect, in underwritten or optioned shares or other securities or assignments, present or proposed.	See item 16 above.										
18. Details of any payments in cash or securities of the Company made or to be made to a promoter or finder in connection with a proposed underwriting or property acquisition.	Not applicable										
19. Details of any shares pooled, deposited in escrow, non-transferable or held under any voting trust agreement, syndicate agreement or control.	Not applicable										
20. Names and addresses of owners of more than a 5% interest in pooled or escrowed shares and their shareholdings. (If shares are registered in the names of nominees or in street names, give names of beneficial owners, if possible.)	Not applicable										
21. Names, addresses and shareholdings of five largest registered shareholders and if shareholdings are pooled or escrowed, so stating. If shares are registered in names of nominees or in street names, give names of beneficial owners, if possible, and if names are not those of beneficial owners, so state.	<table> <tr> <td>Sun Oil Company Limited, 85 Bloor Street East, Toronto 5, Ontario.</td> <td>4,897,114 shares</td> </tr> <tr> <td>Oil Sands Limited, 427 St. James Street W., Montreal, Quebec.</td> <td>150,000 shares</td> </tr> <tr> <td>Ellarsie Ltd., 25 Frederick St., Nassau, Bahamas, W.I.</td> <td>119,500 shares</td> </tr> <tr> <td>Royed & Co., c/o The Royal Bank of Canada, Edmonton, Alberta.</td> <td>100,825 shares</td> </tr> <tr> <td>Fry & Company Limited, 7 King Street East, Toronto 1, Ontario.</td> <td>21,212 shares</td> </tr> </table>	Sun Oil Company Limited, 85 Bloor Street East, Toronto 5, Ontario.	4,897,114 shares	Oil Sands Limited, 427 St. James Street W., Montreal, Quebec.	150,000 shares	Ellarsie Ltd., 25 Frederick St., Nassau, Bahamas, W.I.	119,500 shares	Royed & Co., c/o The Royal Bank of Canada, Edmonton, Alberta.	100,825 shares	Fry & Company Limited, 7 King Street East, Toronto 1, Ontario.	21,212 shares
Sun Oil Company Limited, 85 Bloor Street East, Toronto 5, Ontario.	4,897,114 shares										
Oil Sands Limited, 427 St. James Street W., Montreal, Quebec.	150,000 shares										
Ellarsie Ltd., 25 Frederick St., Nassau, Bahamas, W.I.	119,500 shares										
Royed & Co., c/o The Royal Bank of Canada, Edmonton, Alberta.	100,825 shares										
Fry & Company Limited, 7 King Street East, Toronto 1, Ontario.	21,212 shares										

22. Names and addresses of persons whose shareholdings are large enough to materially affect control of the Company.	Sun Oil Company Limited, 85 Bloor Street East, Toronto, Ontario, is the only Company whose shareholdings are large enough to affect materially control of the Company.
23. Details of any registration with or approval or authority for sale granted by or any filing with a Securities Commission or corresponding Government body.	Letter of receipt dated January 26, 1955 of the Ontario Securities Commission. Letter of receipt re prospectus dated February 18, 1965 of the Alberta Securities Commission.
24. Has any application for registration with or approval or authority for sale by or any filing with a Securities Commission or corresponding Government body ever been refused, cancelled, suspended or revoked? If so, give particulars.	No
25. Particulars of any bonds, debentures, notes, mortgages, charges, liens or hypothecations outstanding.	Upon and subject to the provisions and conditions contained in Trust Indenture made as of April 1, 1965, the Company has issued \$12,469,900 6% Debentures (Alberta Issue) dated May 15, 1965, to mature May 15, 1975, and partially convertible into shares of the Company. For advances made by Sun Oil Company Limited, the Company as at July 31, 1965, has issued promissory notes for \$6,200,000 bearing interest at 7%, with principal payable on demand and interest payable on the last days of March, June, September and December in each year.
26. If assets include investments in the shares or other securities of other companies, give an itemized statement thereof showing cost or book value and present market value.	Not applicable
27. Enumerate fully each of the following property classifications, giving claim or property numbers, approximate acreage, townships and mining camp or oil field: (a) Properties owned where titles vested in Company. (b) Properties leased. (c) Properties otherwise held. Give particulars of title held by the Company in each instance (e.g. patented, unpatented, Crown granted, held under mining license, perpetual lease, etc.)	See Exhibit "A" on page 9 under heading "Property".
28. Full particulars of any royalties or other charges payable upon production from each individual property.	See Exhibit "A" on page 9 under heading "Property".
29. Names and addresses of vendors of any property or other assets intended to be purchased by the Company showing the consideration to be paid.	See Exhibit "A" on page 8 under headings "Design and Construction" and "Capital Cost Estimate and Financing".

30. Names and addresses of persons who have received or will receive a greater than 5% interest in the shares or other consideration to be received by the vendor. If the vendor is a limited company, the names and addresses of persons having a greater than 5% interest in the vendor company.	Not applicable
31. Are any lawsuits pending or in process against the Company or any of its properties, or are there any other circumstances which might affect the Company's position or title adversely? If so explain fully.	No
32. Describe plant and equipment on property or properties.	See Exhibit "A" on page 8 under heading "Design and Construction".
33. Describe all development accomplished and planned.	See Exhibit "A" on page 8.
34. Date and author of mining or petroleum engineer's or geologist's report filed with this application and available for inspection on request.	Report dated August 17, 1965, of Walter George Bahan, Divisional Chief Geologist, at Calgary, Alberta, of Sun Oil Company.
35. Full particulars of production to date.	See Exhibit "A" on page 10.
36. Have any dividends been paid? If so, give date, per share rate, and amount paid in dollars on each distribution.	No
37. Name and address of the solicitor or attorney whose certificate that the applicant is a valid and subsisting company and that the shares which have been allotted and issued were legally created and are fully paid and non-assessable has been filed with the Exchange.	Messrs. Blackwell, Hilton, Treadgold & Spratt, 372 Bay Street, Toronto, Ontario.
38. (a) Have any shares of the Company ever been listed on any other stock exchange? If so, give particulars.	No
(b) Is any application for listing the shares of the Company on any other stock exchange now pending or contemplated? If so give particulars.	Application for listing the shares of the Company on Calgary Stock Exchange is now pending or contemplated.
(c) Has any application for listing of any shares of the Company ever been refused or deferred by any stock exchange? If so, give particulars.	No

<p>39. Particulars of the principal business in which each officer and director has been engaged during the past five years, giving the length of time, position held and name of employing company or firm.</p>	<p>The principal business in which each officer and director of the Company has been engaged during the past five years is as follows:</p> <p>ALEX ETHELRED BARRON — Vice-President, Treasurer and a director of Canadian General Investments Limited and Third Canadian General Investment Trust Limited;</p> <p>THOMAS PETER CLARKE — Vice-President of Great Canadian Oil Sands Limited since May, 1964, prior to which he was Managing Director of Great Canadian Oil Sands Limited;</p> <p>WILLIAM HENRY DAVIS — from June, 1960 to November, 1962, Manager of Process Engineering of Sun Oil Company; from November, 1962 to May, 1964, Chairman, Technical Advisory Committee respecting Great Canadian Oil Sands Limited to Sun Oil Company; and from May, 1964, Vice-President of Great Canadian Oil Sands Limited;</p> <p>DARWIN WORTH FERGUSON — since May, 1964, a Vice-President and director of Sun Oil Company, prior to which he was President and a director of Sun Oil Company Limited;</p> <p>ARDAGH SIDNEY KINGSMILL — partner in the law firm of Tilley, Carson, Findlay & Wedd;</p> <p>ROBERT LAW — partner in the law firm of Blackwell, Hilton, Treadgold & Spratt;</p> <p>MAXWELL CHARLES GORDON MEIGHEN — President and a director of Canadian General Investments Limited and Third Canadian General Investment Trust Limited;</p> <p>JOHN HANEY McWILLIAMS — since 1961, an Assistant Secretary of Sun Oil Company;</p> <p>MAURICE BRADLEY PARMELEE — Secretary-Treasurer of Sun Oil Company Limited;</p> <p>WILLIAM HAROLD REA — since July, 1964, Chairman of the Board of Great Canadian Oil Sands Limited; retired in 1963 as President of Canadian Oil Companies, Limited;</p> <p>JAMES SPENCER ROE — since 1961, Assistant Secretary-Treasurer of Sun Oil Company Limited;</p> <p>CLARENCE HERBERT THAYER — Senior Vice-President and director of Sun Oil Company;</p> <p>DONALD MILNER TREADGOLD — partner in the law firm of Blackwell, Hilton, Treadgold & Spratt;</p> <p>JOSEPH GRANT SPRATT — from 1960 to 1961, President of Triad Oil Co. Ltd. and since 1961, a petroleum consultant; and</p> <p>DONALD JAFFRAY WILKINS — President of Fry & Company Limited.</p>
<p>40. The dates of and parties to and the general nature of every material contract entered into by the Company which is still in effect and is not disclosed in the foregoing.</p> <p>Except for management contracts, do not include particulars of any contract entered into in the ordinary course of business carried on or intended to be carried on by the Company.</p>	<p>Agreement made the 15th day of December, 1964 between the Company and Her Majesty the Queen in the right of the Province of Alberta, in relation to construction, ownership and costs of a bridge over the Athabasca River near Fort McMurray, Alberta and in relation to ownership of the road from such bridge to Bituminous Sands Lease No. 4.</p>
<p>41. Any other material facts not disclosed in the foregoing.</p>	<p>None</p>

42.

STATEMENT SHOWING DISTRIBUTION OF ISSUED CAPITAL

as of August 31, 1965

FREE STOCK

	Shares	Shares
(a) Distributed and in the hands of the public (exclusive of the parent company, promoters, officers and directors of the Company and their agents or trustees).	1,050,618	
(b) Distributed and in the hands of the parent company, promoters, officers and directors of the Company and their agents or trustees.	4,931,874	
Total free stock		5,982,492

ESCROWED OR POOLED STOCK

(c) Held in escrow or pool as set out in Item 19 of this application.	Nil
Total issued capital	5,982,492

RECORD OF SHAREHOLDERS

Number of registered shareholders holding shares in class (a) above	3,626
Number of registered shareholders holding shares in class (b) above	14
Number of registered shareholders holding shares in class (c) above	Nil

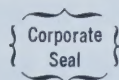
43.

STATEMENT SHOWING NUMBER OF SHAREHOLDERS

as of August 31, 1965

Number		Shares
2,799	Holders of 1 — 100 shares	154,957
749	" " 101 — 1000 "	246,805
44	" " 1001 — 2000 "	66,808
20	" " 2001 — 3000 "	50,404
7	" " 3001 — 4000 "	25,720
6	" " 4001 — 5000 "	27,750
15	" " 5001 — up "	5,410,048
3,640	Stockholders	Total Shares 5,982,492

Dated at Toronto, Ontario, the 31st day of August, 1965.



GREAT CANADIAN OIL SANDS LIMITED

"W. H. REA", Chairman of the Board.

"A. S. KINGSMILL", Secretary.

EXHIBIT "A"

THE COMPANY

Great Canadian Oil Sands Limited was incorporated under the Companies Act (Canada) by letters patent dated the 29th day of December, 1953, and was registered pursuant to the provisions of The Companies Act (Alberta) on the 6th day of December, 1954. The Company proposes to produce and sell a synthetic crude oil resulting from the extraction of bitumen from the Athabasca Tar Sands. The Athabasca Tar Sands refers to a deposit of quartz sand and clay impregnated with heavy oil or bitumen, located in the Athabasca River region of north-eastern Alberta, approximately 250 miles north of Edmonton. Estimates of the amount of oil in the deposit (including that available to Great Canadian) range from 100 billion barrels to over 600 billion barrels. Efforts to separate the oil from the sand started many years ago and the Company proposes to use a process employing hot water, which process follows procedures developed by the Alberta Research Council under the leadership of Dr. Karl A. Clark. Although now retired from the Alberta Research Council, Dr. Clark acts as a consultant to the Company.

The Company proposes to recover the oil by mining the tar sands by open pit mining, extracting the bitumen from the sands by a hot water process and producing a synthetic crude oil. The synthetic crude oil will be transported by pipeline from the Company's proposed processing plant to Edmonton, Alberta, from where it can be transported east through the Interprovincial Pipeline or west through the Trans Mountain Pipeline. Although to a large extent the proposed facilities are of a conventional nature and proven in practice, some parts of the required facilities have been designed, constructed and operated only on a pilot plant or test unit basis.

DESIGN AND CONSTRUCTION

The design and construction of the facilities required for the Company's proposed project are under the direction of the Company's technical personnel headed by Clarence H. Thayer, the President of the Company and Senior Vice-President of Sun Oil Company.

The Company has entered into a contract as of the 17th day of January, 1964 with Canadian Bechtel Limited under which Canadian Bechtel Limited is to perform engineering as required to describe and detail the facilities required for the Company's project and is to prepare design specifications describing the project in detail. Under the said contract Canadian Bechtel Limited is also to procure materials, machinery and equipment for the construction of the project and is to manage and be responsible for the complete construction of the said facilities and to furnish all requisite construction facilities, camp facilities and services, construction labour and supervision, construction equipment, tools and supplies. The contract includes provisions under which Canadian Bechtel Limited may subcontract portions of the work, such subcontracts to be subject to the Company's approval.

To produce 45,000 barrels per day of synthetic crude oil, the Company's project will include the following major facilities:

- two heavy-duty bucket-wheel excavators, each designed to mine oil sands at the rate of 100,000 tons per day;
- a high-speed conveying system to transport the oil sands from the mining area to the separation plant;
- a separation plant to recover approximately 60,000 barrels per day of bitumen from the oil sands;
- conventional delayed cokers to convert the recovered bitumen into gas, liquid and approximately 2,800 tons per day of coke;
- three large desulphurizers to desulphurize and up-grade the liquid portion of the coker distillate using an established hydrogenation technique—approximately 60 million cubic feet per day of hydrogen will be required for this purpose, using the gaseous portion of the coker distillate as raw material;
- a plant for converting the hydrogen sulphide produced in the desulphurizing operation into approximately 300 long tons per day of sulphur;
- a plant using the coke as fuel to produce steam and to generate electricity;
- a pipeline, capable of transporting 45,000 barrels per day of synthetic crude oil, linking the project with the Interprovincial Pipeline;
- a road from Fort McMurray to the plant site, a distance of approximately 20 miles, and a 1,550 foot steel truss bridge over the Athabasca River at Fort McMurray, both of which have been completed.

Engineering design is nearing completion and most of the above-mentioned equipment has been ordered; a considerable amount has been delivered at the job. The plant site has been graded and foundations, pipe-supports, steelwork and buildings are nearly completed. Some vessels and other process equipment have been erected. Approximately twenty-five per cent of the estimated field labour required has been expended with the camp presently averaging about 1,200 men.

CAPITAL COST ESTIMATE AND FINANCING

The total cost (including estimated fee to be payable to Canadian Bechtel Limited pursuant to the above contract) of the project is estimated by the Company's technical personnel, working in conjunction with Canadian Bechtel Limited, at \$230,000,000, of which approximately \$44,000,000 had been spent by July 31, 1965. Therefore the amount required as at July 31, 1965 to bring the Company's project into production is estimated at \$186,000,000.

By letter dated September 12, 1963, Sun Oil Company advised Great Canadian that it was prepared, subject to certain conditions, to invest up to \$67,500,000 in securities (including \$22,500,000 in voting shares) of Great Canadian and to assist in arranging the balance of the funds required to finance the project to completion. Pursuant to this letter Sun Oil Company Limited took down and paid for \$5,000,000 principal amount of Convertible Income Debentures early in 1964 and later in 1964 purchased 600,000 voting shares of Great Canadian for \$3,000,000. On February 16, 1965, the above-mentioned Convertible Debentures were, in accordance with their terms, converted into 1,000,000 voting shares of Great Canadian. In addition, on February 18, 1965, Sun Oil Company Limited subscribed for and Great Canadian allotted 2,900,000 voting shares, all of which have been taken down and paid for at the rate of \$5 per share. The balance of the said

\$67,500,000 is being invested in Great Canadian by Sun Oil Company Limited by way of advances totalling \$45,000,000, being made from time to time having regard to the over-all financing of the Company's project.

The balance of the amount required to bring the Company's project into production is presently proposed to be financed by short-term loans, arrangements with respect to which have not yet been finalized by Great Canadian. It is proposed that the Company will issue short-term notes at such times, in such amounts, with such maturities and at such discounts or premiums as may be determined from time to time. It is anticipated that after the Company's project becomes fully operational, the short-term loans will be refunded from the proceeds of the sale of long-term debt.

PROPERTY

The Company proposes to obtain bituminous sand for processing pursuant to Bituminous Sands Lease No. 4 (hereinafter called the "Lease"), which has been sub-leased to the Company as hereinafter described. The Lease grants, subject to all the terms, conditions, covenants and provisos therein contained, the exclusive right and privilege to mine, quarry, work, by any method other than the drilling of wells thereon for petroleum, remove and dispose of the bituminous sands within and under certain lands (hereinafter called the "leased lands") in Ninety-second (92) Township, in the Tenth (10) Range, west of the Fourth (4) meridian, in the Province of Alberta, as more particularly described in the Lease and containing by admeasurement 3,840 acres more or less. The Lease is for the term of twenty-one years computed from the 1st day of June, 1945, renewable for further terms each of twenty-one years so long as the leased lands are capable of producing bituminous sands in commercial quantity subject in each case of renewal to the terms and conditions in force at the time such renewal is granted. The Lease requires the payment during each year of the said term of rent of \$1 for each acre of the leased lands.

Bituminous Sands Royalty Regulation No. 1 made pursuant to The Mines and Minerals Act, 1962 (Alberta) is applicable with respect to the operations of Great Canadian, its successors and assigns, in the leased lands. These regulations provide for a royalty to the Crown in right of Alberta on all products derived from the bituminous sands. The royalty, in relation to synthetic crude oil, is 8 per cent of the number of barrels produced in any month up to 900,000 barrels, plus 20 per cent of the number of barrels produced in such month in excess of 900,000. With respect to other products derived from the bituminous sands the royalty is 16 $\frac{2}{3}$ per cent of such products. Any sale of products, unless otherwise ordered by the Minister of Mines and Minerals, is to include the royalty share of such products belonging to the Crown, but no royalty is payable on products, other than synthetic crude oil, consumed in Great Canadian's operations. Deductions, as specified by the Minister of Mines and Minerals, may be allowed for charges incurred in transporting the products. These regulations continue in force until March 31, 1972 and thereafter until changed by the Lieutenant Governor in Council.

The Lease being then owned by Sun Oil Company Limited (hereinafter sometimes called "Sun") in trust for itself as to an undivided 75% interest and for Abasand Oils Limited (hereinafter sometimes called "Abasand") as to an undivided 25% interest, Sun and Abasand did by Agreement (hereinafter called the "Sublease") made as of the 5th day of January, 1965, grant and sublet unto Great Canadian, subject to the terms and conditions contained in the Lease and in the Sublease (including the consent of the Minister of Mines and Minerals of Alberta), all the rights and privileges granted under the Lease.

Pursuant to the Sublease Great Canadian will be required to pay the rental under the Lease to the Province of Alberta and all royalties to the Province of Alberta arising from the mining of the bituminous sands from the leased lands and to pay or reimburse Sun and Abasand for taxes, rates, assessments and other amounts payable in respect of the leased lands and the Company's plant and related facilities. In addition Great Canadian agrees to pay all amounts which may become payable to Canada under an agreement between Canada and Abasand, the outstanding principal amount of which is \$1,802,107.39.

The Sublease also provides for the payment of royalties by Great Canadian on the basis of 75% to Sun and 25% to Abasand. The basic royalty is 10¢ per barrel of bitumen extracted or recovered from bituminous sands from the leased lands. The Sublease also provides for additional royalty to Sun and Abasand on each barrel of desulphurized crude oil attributable to such bitumen, which additional royalty is payable when the price received by Great Canadian for such desulphurized crude oil exceeds specific prices at different times as provided in the Sublease. The Sublease further provides for a 50% increase in both royalty on bitumen and on desulphurized crude oil in each year after Great Canadian's cash flow has equalled its total initial investment in the project provided that Great Canadian's net income for that year attributable to the project is greater than 20% of its gross income attributable to the project. The Sublease contains definitions of the following terms, namely: "the net income", "the gross income", "the cash flow", "operating costs", "project" and "the total initial investment" which are utilized in determining the amount of the royalty on desulphurized crude oil and determining the applicability of the increase in royalties.

The Sublease also contains provisions for the payment of advanced royalties where the production or deemed production from the leased land is less than 8,212,500 barrels of desulphurized crude oil. The effect of these provisions is to provide minimum royalties to Sun and Abasand on 8,212,500 barrels of desulphurized crude oil per calendar year and the bitumen required to produce the same, subject to decrease in case of "force majeure" as defined in the Sublease. Great Canadian is given credit against future royalties for any advanced royalties paid.

The Sublease requires Great Canadian to continue with due diligence and prudence the construction and completion of a plant and its related facilities designed to produce approximately 45,000 barrels of marketable desulphurized crude oil per day, and to make arrangements to transport to Edmonton, Alberta, at least such quantity of product.

The Sublease contains certain other covenants by the parties thereto and provisions relating to the disposition of the interests of the parties under the Sublease, the Lease and the plant and related facilities and provisions relating to the development or disposition of certain bituminous sands leases now held by Great Canadian and Sun respectively. The Sublease, however, specifically permits Sun, Abasand or Great Canadian to mortgage, charge or pledge its interests under the Sublease and under the Lease.

Unless earlier terminated under certain specific provisions of the Sublease, the Sublease, except one section dealing with certain rights as between Sun, Abasand and Great Canadian, terminates upon the termination of the Lease as it may be renewed, amended or replaced from time to time.

Great Canadian presently holds Bituminous Sands Lease Number 14 located approximately 30 miles north of Lease Number 4 in the Athabasca Tar Sands area but has no present plans for the development of this property.

SALE OF PRODUCT

By agreements made as of the 5th day of January, 1965 between (i) Great Canadian and Shell Canada Limited and (ii) Great Canadian and Sun Oil Company Limited, Great Canadian has arranged for the sale (subject to prevention, delay or interruption of performance by reason of an event of force majeure as defined in the agreements) of its production of desulphurized crude oil up to 16,425,000 barrels thereof per twelve month period to Shell Canada Limited as to 25% thereof and to Sun Oil Company Limited as to 75% thereof and for the offering by Great Canadian to Shell Canada Limited and Sun Oil Company Limited in the above proportions of certain additional production of such product by Great Canadian, if available. The desulphurized crude oil is to be delivered to the purchasers at the receiving facilities of Interprovincial Pipe Line Company at Edmonton, Alberta.

The agreements provide that Great Canadian will continue with due diligence and prudence the construction and completion of the plant and related facilities now under construction by Great Canadian and that upon such completion Great Canadian shall exert its best efforts to produce desulphurized crude oil at an average daily rate of 45,000 barrels.

The agreements provide a definition of desulphurized crude oil and set out the approximate specifications thereof and provisions related to price adjustment in the event of variations from such specifications.

Since the desulphurized crude oil has not yet been run in a commercial refinery, since its advantages or disadvantages in relation to conventional crudes are not precisely known and since there is no established market for the desulphurized crude oil, the price per barrel to be paid to Great Canadian by the purchasers (subject to subsequent adjustment by reason of variations in the composition of the desulphurized crude oil as provided in the agreements) shall be the amount obtained upon subtracting 8.2¢ from the average of the then current prices per barrel in Edmonton, Alberta, for crude oils produced from the Devonian D-3 Formation in the Redwater Field, the Beaverhill Lake Formation in the Swan Hills Field and the Beaverhill Lake Formation in the Kaybob Field in effect on the date of delivery, all determined as set forth in the agreements.

The agreements are to remain in force for an initial period of 23 years from January 5, 1965 or 20 years from the date upon which initial deliveries of desulphurized crude oil are made under the agreements, whichever period shall first expire, and are to be renewable by Shell Canada Limited and Sun Oil Company Limited as to their respective agreements for further terms of 5 years as provided in the agreements so long as the lands comprised in the Lease are economically capable of producing bituminous sands in commercial quantity.

OIL AND GAS CONSERVATION BOARD APPROVAL

The Company's scheme for the recovery of 16,425,000 barrels per year of synthetic crude oil has been approved by the Alberta Oil and Gas Conservation Board subject to certain terms and conditions. Such approval is the only one given to date with respect to the commercial recovery of oil from the Athabasca Tar Sands.

FINANCIAL STATEMENTS

GREAT CANADIAN OIL SANDS LIMITED
(Incorporated under the laws of Canada)

BALANCE SHEET AS AT JULY 31, 1965

ASSETS

Current:		
Cash		\$ 136,347
Sundry accounts receivable and advances to employees		5,755
		<u>142,102</u>
Deposit with Government of Alberta:		
Cash and Government of Canada bonds		20,660
Plant facilities and other assets (note 1):		
Plant facilities under construction — at cost	\$35,393,444	
Licensing rights and prospecting permit — acquired for 500,000 shares of the company's stock	562,500	
Furniture, fixtures, etc. — at cost less accumulated depreciation	33,104	
Preproduction and other expenses less investment income (statement 2)	9,048,058	
		<u>45,037,106</u>
		<u>\$45,199,868</u>

LIABILITIES AND CAPITAL

Current:		
Accounts payable and accrued charges (including \$105,907 payable to affiliated companies)		\$ 563,488
7% demand loan — Sun Oil Company Limited		6,200,000
		<u>6,763,488</u>
6% unsecured, partially convertible debentures maturing May 15, 1975 (Alberta Issue)		12,469,900
Capital (notes 2 and 3):		
Authorized — 9,000,000 shares without nominal or par value ..		
Issued — 5,982,492 shares		25,966,480
		<u>\$45,199,868</u>

Approved on behalf of the Board:

“W. H. REA”, Chairman.

“D. J. WILKINS”, Vice-President.

The accompanying notes should be read in conjunction with the above statement.

GREAT CANADIAN OIL SANDS LIMITED
STATEMENT OF PREPRODUCTION AND OTHER EXPENSES LESS INVESTMENT INCOME
FOR THE SEVEN MONTHS ENDED JULY 31, 1965

	Balance December 31, 1964	Expended during the period	Balance July 31, 1965
Exploration, development, engineering and economic studies:			
Pre-incorporation exploration and engineering services	\$ 150,958	\$	\$ 150,958
Exploration	101,651		101,651
Surveys and soil tests	67,913		67,913
Engineers' and consultants' fees	46,800	52,313	99,113
Outside services		7,563	7,563
Lease rental & prospecting permit	11,127	2,019	13,146
Lease expenses	442,350	433,865	876,215
Travel	139,762	48,736	188,498
Feasibility study for development of oil sands	3,305,002	327,471	3,632,473
Field test unit	1,411,593	914,690	2,326,283
	<u>\$5,677,156</u>	<u>\$1,786,657</u>	<u>\$7,463,813</u>
Administrative:			
Administrative salaries (note 5)	\$ 262,374	\$ 147,287	\$ 409,661
Legal and audit	134,024	30,761	164,785
Rent	37,900	6,121	44,021
Leasehold improvements	1,007		1,007
Interest on bank and demand loans	57,116	264,310	321,426
Interest on 6% Debentures (Alberta Issue)		157,838	157,838
Alberta Debentures Issue expense		493,185	493,185
Trustee administration expense		6,740	6,740
Insurance		29,520	29,520
Depreciation of furniture, fixtures, etc.	2,774		2,774
Telephone and telegraph	3,105	2,956	6,061
Foreign exchange		96,285	96,285
Office and sundry expenses	51,296	19,686	70,982
Preliminary financing and incorporation expenses	23,385		23,385
	<u>\$ 572,981</u>	<u>\$1,254,689</u>	<u>\$1,827,670</u>
	<u>\$6,250,137</u>	<u>\$3,041,346</u>	<u>\$9,291,483</u>
Deduct investment income	136,757	106,668	243,425
	<u><u>\$6,113,380</u></u>	<u><u>\$2,934,678</u></u>	<u><u>\$9,048,058</u></u>

The accompanying notes should be read in conjunction with the above statement.

GREAT CANADIAN OIL SANDS LIMITED
NOTES TO FINANCIAL STATEMENTS
JULY 31, 1965

- The estimated total cost of the construction and preproduction programme is \$230,000,000 of which approximately \$44,000,000 had been spent to July 31, 1965 and commitments for approximately \$48,000,000 were outstanding at that date.
- During the seven months ended July 31, 1965 the following shares were issued:
 - 1,000,000 shares to Sun Oil Company Limited on the conversion of the 6% unsecured convertible income debentures due June 30, 1969.
 - 2,900,000 shares at \$5 per share to Sun Oil Company Limited.
 - 34,750 shares at \$3 per share to various persons on the exercise of options under contracts dated March 14, 1963.
- The company's authorized but unissued share capital is reserved to the following extent:
 - 500,000 shares for issue upon the partial conversion of the 6% Debentures (Alberta Issue).
 - 7,500 shares at \$3 per share under a contract dated June 29, 1964 granting an option to a director exercisable subject to certain terms and conditions on or before June 29, 1969.
- Subject to certain terms and conditions, a portion of the 6% Debentures (Alberta Issue) may, at any time after May 15, 1968 and before May 1, 1975, be converted into fully paid and non-assessable shares of the company on the following basis, that is, with respect to each \$100 principal amount of the Debentures, \$32 thereof may be applied to the purchase of and converted into
 - four shares after May 15, 1968 and before May 16, 1970, or
 - three shares after May 15, 1970 and before May 16, 1973, or
 - two shares after May 15, 1973 and before May 1, 1975.
- During the seven months ended July 31, 1965 the total remuneration of the directors from the company amounted to \$56,311.

GEOLOGICAL REPORT

GREAT CANADIAN OIL SANDS BITUMINOUS SANDS PROJECT

McMURRAY, ALBERTA.

INTRODUCTION

This report is a resumé of the geology and estimate of the reserves contained in Lease #4, McMurray bituminous sand property which is to be exploited commercially by Great Canadian Oil Sands Limited. The report is based primarily on recent exploration undertaken on the property by the Company under the supervision of the author.

LOCATION OF PROPERTY

Bituminous Sands Lease No. 4 is located on the west bank of the Athabasca River approximately 20 miles north of the Town of McMurray and 220 miles north of the City of Edmonton in the Province of Alberta. This tract of land is situated in the Northwest Quarter (NW¼), Township Ninety-two (Twp. 92), Range Ten (Rge. 10), West of the Fourth Meridian (W4M). Lease 4 covers an area of 3,898 acres (more or less).

GENERAL GEOLOGY

The bituminous sands which are to be mined, fall within what is generally referred to as the McMurray formation, a sand sequence of Lower Cretaceous age that lies unconformably on eroded limestones of the Devonian System. Henceforth, in this report, the terms "bituminous sands" and "McMurray formation" will be used synonymously.

The lithology of the bituminous sands is variable. In general, the formation, which has an average thickness of 175 feet, consists of a series of fine to coarse grained quartz sands, which are highly cross bedded and impregnated with varying amounts of bitumen and interbedded with barren clay and silt bands. There does not appear to be any apparent pattern to the succession of rich and lean bituminous sand beds, but there is a noticeable increase in the coarseness of the sediment and in the bitumen saturation towards the bottom of the formation.

The McMurray sands dip or tilt to the southwest at 7 to 8 feet per mile. In addition, there is extensive cross bedding ranging from 5 to 45 degrees to the northwest.

Glacial overburden, including muskeg, ranging in thickness from 0 to 145 feet covers an extensive area of the property.

EVALUATION OF PROPERTY

In order to determine the value of the property and to establish reserves, an extensive coring and logging program was carried out. During the past two winters the bituminous sand was cored in 285 holes, the holes ranging in depth between 200 and 300 feet. On 88% of the holes, electric logs were run. The holes were spaced 200 to 400 feet apart on the southern part of the property and 800 feet apart on the northern half.

All cores were assayed to determine bitumen and water content. In addition, the logs were analysed, both quantitatively and qualitatively to determine bitumen and water saturation. Besides providing a check on the core assays, this procedure served to provide information in intervals of poor core recovery. After analysis and extraction of the bitumen from the core, the clean sand samples were examined microscopically to determine silt and clay content. A good number of these were then sieved to establish grain size and re-examined with X-Ray defraction equipment to determine their mineralogical composition.

At the same time as the coring, an overburden evaluation program was carried out on the property. Special equipment was utilized to drill the overburden and to bring up dry samples to the surface. These samples were then examined and classified. Since large quantities of gravel and sand will be needed for building aggregate and road construction, the distribution of these deposits within the overburden was mapped.

From the raw data, a series of maps and cross sections were constructed and utilized in determining reserves, overburden tonnage, grade of ore, fines content, etc.

OVERBURDEN

Except for localized outcrop areas associated with the escarpment paralleling the Athabasca River, the bituminous sands on the property are covered by variable thicknesses of overburden. In general, the overburden is composed of a thin layer of organic soil or muskeg, together with the underlying glacial drift. In addition, thin beds of clay and non-bituminous sands occur between the drift and the oil sands. In the evaluation, oil sands with a bitumen saturation of less than 8% by weight occurring above the ore body, were considered overburden and will therefore be removed with the glacial drift. In the area to be mined, the overburden, as defined above, ranges in thickness between 0 and 110 feet. Its average thickness is 53 feet.

ORE BODY

For various reasons, not all of the bituminous sand contained on the Lease is suitable for feed for a commercial plant. Poor bitumen saturation, excessive clay content, and excessive overburden eliminate some of the sand from consideration. Studies to date indicate that sands with an average bitumen saturation of less than 8% dry weight should be rejected as feed for the extraction plant. Examinations of core hole data indicate that substantial thicknesses of the McMurray formation contain less than 8% bitumen by weight,

STATUS OF ENGINEERING AND CONSTRUCTION

Engineering Design is substantially complete on most portions of the Plant. A small amount of engineering was held open pending completion of scale-up tests which have recently been completed successfully. Purchasing has been completed on all engineered items and most of the bulk commodities.

Shop fabrication of equipment ordered for mining and overburden removal is on or ahead of schedule. This includes a 15 yard power shovel and nine 85 ton end dump trucks which will be used for pre-production overburden removal during 1966. Also included are the large bucket-wheel excavators, belt-wagons and high speed conveying equipment being manufactured in West Germany. Erection of this equipment will be started about June, 1966, for operation in early 1967. Approximately 1,750,000 yards of muskeg and other overburden have been removed during 1965 and construction of mine roads and the tailings dyke are well along.

The plant site has been graded with foundations poured and pipe-supports, steelwork and buildings nearly completed.

Work on the steam and power plant is progressing with one of three boilers well along and the second boiler started. Other power plant equipment and the water treating facilities are on schedule and start-up of the power and steam facilities are planned for late 1966. The 350 foot chimney has been erected.

In the refinery area approximately 70% of the process vessels and perhaps 30% of other equipment is in place. Piping and electrical work is continuing through the winter in enclosed areas made available by careful advance planning.

In the extraction plant area foundations are being poured and building erection will proceed through the winter.

Work on the river water intake is well along and will be completed by spring break-up. Other service facilities are also being developed. Tankage will be completed in the spring of 1966, with two tanks in use for fuel-oil over the winter. Coke handling facilities are being erected.

Approximately half of the sixteen inch 266-mile pipeline to connect with Interprovincial Pipe Line at Edmonton has been completed except for testing and final clean-up. The balance will be completed by spring before thawing of the muskeg.

All in all, the contractor, Canadian Bechtel Limited, reports that the job is 27% complete from the standpoint of labour expended. Approximately \$50 Million has been spent thus far with an additional \$50 Million firmly committed. Material is arriving at the jobsite in increasing quantities at this time. 1,435 tons were received during the week ended December 4, 1965. The field labour force is running at about 1,200 men and this level will continue until spring. A maximum of 1,800 is anticipated during the summer and fall of 1966.

Mining with one bucket-wheel excavator and necessary conveyors is planned to commence in the late winter of 1967 with processing plants being placed in operation in sequence during the spring and early summer.

W. H. DAVIS

December 10, 1965.

especially in the top part. To establish the thickness and volume of the ore body, all material with a bitumen content of less than 8% by weight that occurs above the 8% limit, was considered uneconomical to mine. This material would, therefore, be removed with the glacial overburden; all of the sand with less than 8% bitumen below the pay section would be left in place. The material constituting the entire ore body had to average 8% bitumen by weight; no provision was allowed for selectively discarding the thin zones of low grade material which do occur within the ore body. Within the above limits, the average bitumen content of the ore body was determined to be 12.4% (dry weight). The ore body ranges in thickness from 0 to 240 feet, the average being 130 feet.

RESERVES

In place bitumen (oil) reserves, based on data from core analysis and electric logs, have been estimated for the property. On the assumption that bituminous sand with an average bitumen content of less than 8% by weight would be rejected, the following is a summary of pertinent data and reserves for the area to be mined:

Size of mineable area	—	3,350 acres
Average thickness of ore body	—	130 feet
Average thickness of overburden	—	53 feet
Average bitumen saturation in ore body	—	12.4% (dry weight)
Estimated amount of overburden covering ore body	—	470,000,000 tons (short)
Reserves of mineable ore	—	1,150,000,000 tons (short)
Reserves of bitumen (oil) in place	—	745,000,000 bbls.

Economic studies are continuing in order to determine exact pit limits. The above reserve figures may, therefore, be regarded as subject to some small change.

CONCLUSIONS AND RECOMMENDATIONS

Including the 62 Dominion Government holes that were drilled on Lease 4 in 1947, there are now a total of 327 core holes on the property. These holes should provide sufficient information with which to reasonably predict lease conditions and no additional drilling is recommended for exploration purposes at this time.

After mining commences, additional drilling may prove to be necessary; this would depend primarily on the problems arising from daily mining operations.

W. G. BAHAN (P. Geol.)

CERTIFICATE

I, WALTER GEORGE BAHAN, Geologist, of 805 - 8th Avenue, S.W., Calgary, Alberta, do declare:

1. THAT I graduated as a geologist from the University of Alberta with the Degree of Bachelor of Science in the year 1949; and that I obtained the Degree of Master of Science from the same University in 1951.
2. THAT I am a member of the American Association of Petroleum Geologists, the Alberta Society of Petroleum Geologists, and that I am a registered Professional Geologist for the Province of Alberta, a registered licensed Professional Engineer for the Province of Saskatchewan, and a registered Professional Engineer for the Provinces of British Columbia and Manitoba; and that I have in excess of fourteen years experience in petroleum exploration.
3. THAT I am presently employed by Sun Oil Company as Divisional Chief Geologist, based in the City of Calgary.
4. THAT the above report is based upon field examinations of the property by myself and a group of geologists and engineers under my supervision, and upon a consideration of all available data on holes drilled on the property and adjacent area by other companies and government agencies.

W. G. BAHAN (P. Geol.)

805 - 8th Ave., S.W.,
CALGARY, Alberta.

August 17th, 1965.

